

Fundamental Principles of Health

By ALBERT S. GRAY, M. D.

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HAY FEVER.

Hyperesthetic rhinitis, commonly known as "hay fever," "rose cold," "autumnal catarrh," and so forth, is a condition characterized annually by paroxysms of sneezing, accompanied by varying degrees of coryza (cold in the head) more or less prolonged. It is acute catarrhal inflammation of the mucous membrane of the nasal cavities, the eyes and the respiratory tract, sometimes accompanied with fever and asthma.

Hay fever rages during August and September, and the popular belief is that the pollen of the goldenrod is responsible for it; but ragweed, trees, grasses and other plants, including the cereal grains, also cats, dogs, sheep, chickens, horses and cows all do their part in adding to the atmospheric dust to which so many are hypersensitive. Besides these dusts, chemical fumes and many pungent odors also have their victims. But it is not necessary to the condition that even the irritant should enter the nose. For example, there are probably few persons who have not under certain temporary physical conditions experienced sneezing violently several times immediately on stepping from a dense shade into the bright sunlight—that is a reflex irritation—and unfortunately many individuals are so adjusted that under certain conditions the irritation of any area supplied by the fifth nerve suffices to create distress; hence, a bright light entering the eyes may irritate the hyperesthetic ciliary nerve filaments and for a long time maintain reflex symptoms in the nose.

In addition to the dust, light, heat, cold and other external agencies, there are more immediate local irritations so frequently to be found in the neurotics, consisting of turbinal enlargements, ethmoid, frontal or maxillary sinusitis, deflected septum, polypi and eustachians. But generally these must be considered concomitant to the fundamental physical condition and not the immediate cause of the explosions. Many a patient has been treated and operated upon with a view to the removal of the irritation through the correction of one or more of these local morbid conditions, only to have the hay fever paroxysms continue from year to year without abatement; while others have been relieved.

It is generally accepted that only two factors are necessary for the causation of hay fever; namely, first, an internal condition which will insure an abnormal sensitiveness of the nerve centers and filaments; and, second, an external irritation.

The strong, well nourished organism is not as a rule excessively irritable; but, on the other hand, the internal condition of abnormal sensitiveness is known to be induced easily as the result of defective metabolism creating a physical state of excessive susceptibility in the individual, a condition generally recognized as a common cause of areas of superficial hyperesthesia and even of neuralgia in various parts of the body; a general disturbance of the normal functional equilibrium, under which condition the individual reacts violently to stimuli.

We take it quite as a matter of course, because it is universally known, that an ill nourished or a hungry baby will be fretful and peevish, and we are not at all surprised at very marked evidence of irritability in a convalescent formerly noted for general calmness and self-possession. Hence it should require no great strain or stretch of one's imaginative powers to be able to apply the same principle to the individual cells composing our bodies and to comprehend that the neurotic temperament is fundamentally a matter of defective metabolism, because of which the individual cells are not properly nourished. The universal remedy for a fretful infant is proper nutrition; the universal remedy for the irritable convalescent is proper nutrition, and so, too, the remedy for the hay fever victim is to build up a stable nervous system by means of proper nutrition.

The authorities are agreed that among the personal habits which predispose to hay fever are the habitual use of narcotics and alcoholic stimulants, excessive excitement and over-exertion and what are known as the rheumatic and gouty tendencies. This all points in the direction of defective metabolism. Moreover, Sajous recommends as a preventive the use of thyroid extract, commencing four weeks before the onset of the periodic attack. Obviously, if the use of the thyroid extract for four weeks prior to the expected attack is of any value as a preventive, it is reasonable to assume that such hygienic steps as will lead to an increased activity of one's own thyroid secretion, beginning right at this time and continuing without interruption up to and through the next season, must inevitably produce some modification in the severity of the symptoms, and con-

tinued from year to year it will in time tend to overcome the hyperesthesia permanently.

The great difficulty in such cases lies, in the fact that the very nature of the condition is such as almost to preclude the possibility of the victim's persistently adhering to so simple and logical a line of action. But to such as have the courage to investigate and come to understand that even the cell is not the unit of life; that the cell is not only made up of protein molecules but its form and function are determined by the chemical structure of its constituent molecules; in short, to those who come to know themselves and treat their bodies accordingly there is undoubtedly the certainty of permanent relief.

THE PITUITARY GLAND.

The puzzle of the pituitary gland (hypophysis cerebri) presents one of those curious instances known to medical history wherein widely contradictory observations make it difficult to confirm the answer to any given question concerning the physiology and the pathology of the organ or the action (function) of the gland either in health or in disease.

Even in the apparently extremely simple propositions as to whether the organ is essential to life we find the investigators divided into two groups, one group comprising those who maintain that the gland is indispensable to life and the other, almost equal in number, holding it to be nonessential to life.

Undoubtedly the confusion is largely due to the fact that the position of this gland is such that it is extremely inaccessible to operative interferences, so that attempts to remove it are usually attended with fatal results from the operation itself; hence we are able to learn but little if anything concerning the significance of the organ in this way, and are forced to depend for our knowledge concerning the pituitary gland on what may be revealed by pathological anatomy and clinical observation. Then, too, this body, while not much larger than a pea, consists of two parts or lobes, very closely blended, but one distinctly larger and of a structure distinctly different from that of the other.

The larger anterior lobe is of a glandular structure and belongs to the type of glands which are believed to form an internal secretion. The much smaller posterior lobe is of nervous origin and composed chiefly of a net-like framework of fibers, the interstices being filled with brain cells. The two lobes are very closely associated, the neck of the posterior lobe being completely enveloped or surrounded by the epithelium of the anterior lobe, this insuring an intimate interaction in function.

Howell and others have shown that extracts of the anterior lobe when injected into the veins have little or no physiological effect, while extracts of the posterior lobe, on the contrary, cause a marked rise of blood pressure and a slowing of the heartbeat. These effects resemble in general those obtained from adrenal extracts but differ in some details. For instance, an extract of the pituitary gland known as "pituitrin" is prepared for use in medicine and has been used for the stopping of hemorrhage after childbirth, since it acts like "adrenalin" but maintains its action longer. And Ott discovered that extracts of this body stimulate the activity of the mammary glands and constitute in effect an efficient galactagogue (milk-forming stimulant).

It is generally believed that the pituitary body, in relation with the other ductless glands, helps to promote the normal growth of the body, particularly the bones, and there is evidence associating disturbance of pituitary function with deranged nitrogen, calcium and phosphorus metabolism. Knowledge derived from the action of other glands on these elements proves this alone to be a highly important function and sufficient to justify the existence of the gland.

Pierre Marie in 1888 appears to have first associated a disease known as acromegaly (gigantism) with the pituitary body; the idea was accepted and the connection has since been confirmed by many until at the present time it is generally conceded that there are two distinct clinical entities, both disturbances of growth, to be ascribed to deranged functioning on the part of the pituitary gland. One of these is acromegaly, a disease characterized by the enlargement of certain bones; the other is distinguished by a delayed development with adiposity (excessive development of fat) and general atrophy (a wasting from lack of nutrition).

Regarding the exact nature of the disturbance in the pituitary gland in acromegaly, there is still considerable difference of opinion, but the weight of evidence favors the view that it is due to increased secretion of the anterior lobe. The pathologic condition most frequently associated with acromegaly is an enlargement of the anterior lobe with material increase in the secretory cells. There seems to be some antagonistic relation between the pituitary gland and the sexual glands (ovaries and testes), and it is perfectly well known that when an animal is spayed it grows abnormally large; this would seem to prove that the latter exert a restraining influence over the former, probably preventing its oversecretion. Obviously this implies that whatever will favor general health conditions tends to regulate the action of the powerful ductless glands, so that in wholesome food we have the key which will give us the control of these wonderful vital towers.

FINE FIVE-ROOM COTTAGE HOUSE

Arrangement of Roof Gives Most Interesting Effect to the Structure.

SHINGLE SIDING A FEATURE

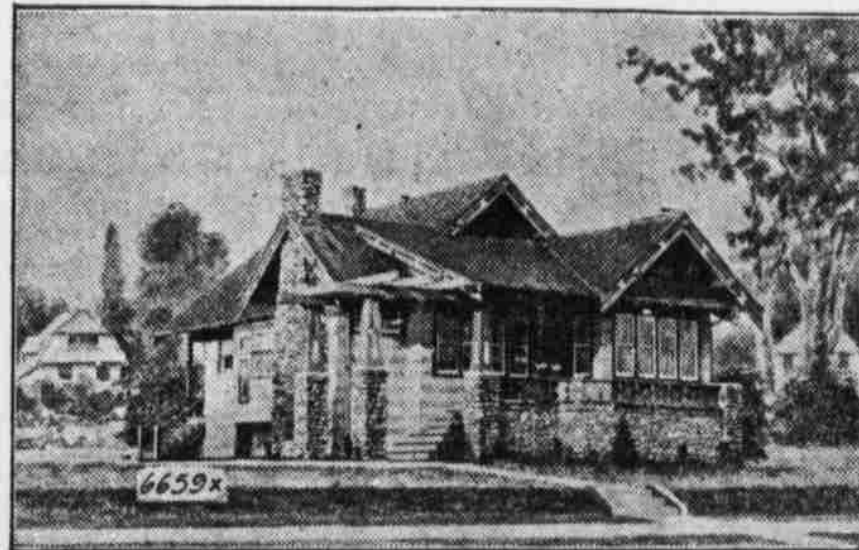
Idea Has Been to Arrange Designs to Carry Out the General Architectural Effect—Lights Are Made on the Multiple Window Plan.

A cobblestone trim with shingle siding gives this five room cottage house a distinguished appearance.

An interesting effect is produced by giving different angles and pitches to the roof, which effect is extended out over the front steps by the level top of the pergola. It is not often that a roof is designed commencing with a level, then stepping up to square pitch. The rubble stone wall piers and chimney all help to produce an unusual front. The manner of shingling the sides of the house is different from the ordinary, but it helps to carry out the architectural effect, as intended.

This manner of siding houses uses up just about as many shingles as it does to space them evenly, but it gets away from the ordinary way of laying shingles and it makes a distinction between the sides of the house and the roof. The joints are broken the same and the covering is just as thick and valuable, the only difference is in the appearance.

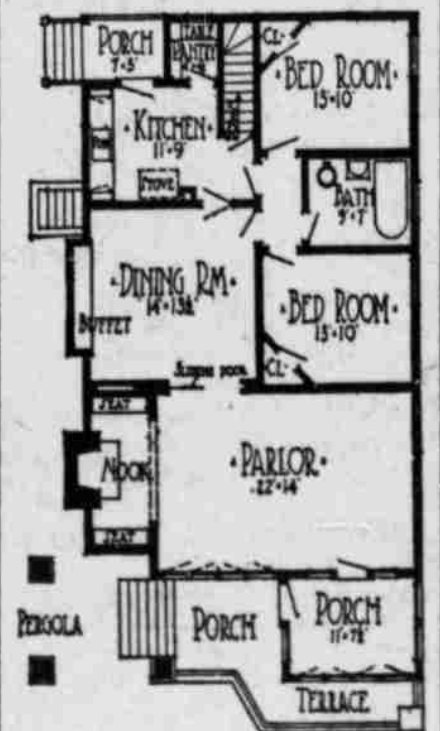
The windows are built on the multiple window plan, but they are so arranged as to produce the casement window appearance. Because of the double sash, any window may be opened at the top or bottom in the usual way. They may be screened, curtained and shaded according to the best custom, so that the women have no objections to offer. This probably accounts for the use of so many windows built in this way. Woodworking



factories make box frames any size and to contain as many windows as the plan calls for. There are weight boxes between each two windows, so the sashes are hung by sash weights in the usual way. The idea is new in house lighting.

Twenty or thirty years ago the fad was to make windows narrow. Some of them were mere slits in the wall. Sometimes the wall was beveled away outside to admit slanting rays of light into the darkened rooms. But people soon tired of such dungeons, and the fashion pendulum seems to have swung clear over in the other direction and the style now demands as much light and sunshine as possible.

Years ago windows were fitted with outside blinds. It was customary for the women to go around each morning and close the blinds to keep the



Floor Plan.

sun from fading the carpets. Because of the advantages of polished or varnished hardwood floors and numerous rugs, housekeepers are not so much afraid of fading colors. Also manufacturers have learned how to use better dyes, but in all probability the chief reason is better education in regard to health.

The world progresses slowly, but it is evident that the different subjects taught in schools are broadening the minds of pupils so that as they grow up the old ignorant notions of the danger lurking in sunshine and some other back numbers are laughed out of existence. The improved micro-

scopes which have helped to broaden the study of bacteriology have done more to eradicate disease and to install sensible ideas, many of which have really become fashions, than all the preaching of old-time doctors.

A study of this cottage house plan shows more window surface than a \$50,000 house built years ago. When the window shades are rolled up to the top the house is as light as a new office building. There are no dark corners for the harboring of dirt and bacteria.

The plan shows that the front of the cottage is given up entirely to comfort. There is a living room 22 by 14 feet, with a sun parlor loggia 11 feet by 7 feet 6 inches arranged in such a manner that both rooms are comfortable in winter as well as in summer.

The large cobblestone chimney is built especially to provide a fireplace for one end of the fine living room. The cobblestone finish may be reproduced in the living room or not, as the owner wishes.

Cobblestone for inside finish has never become very popular. However, if the stones used are carefully selected for color, the finished chimney and fireplaces may be made very attractive. The stones that are polished by rain and snow and sunshine acquire colors soft in tone and they may be selected to blend together harmoniously to build up a work of art. This part of the decoration belongs to the owner. The stone mason will place the cobblestone in any position required, but the superintendence of the owner will be necessary to bring about the desired result.

The sliding door which connects the dining room with the parlor has a rather wide opening. Wide doorways are used in very small houses. In fact, it would almost appear that the widest doors are fitted into the smallest houses. Wide doors are a necessity to accommodate modern furniture. The big upholstered chairs and davenport require more than an ordinary doorway to pass them through.

There is an extension built out from the dining room to accommodate a built-in buffet or sideboard. This extension is a study because of the manner in which the built-in cabinet work is made. Such designs show the care with which modern houses are put together. Several odd-shaped windows built into this extension are intended to admit plenty of light to the dining

room and to merge with the built-in cabinet work in such a way as to create envy among the neighbors. The two bedrooms and the bathroom are connected by a short hallway with doors opening both into the dining room and kitchen. The kitchen, pantry, cellarway and back porch of this little cottage house are very compact and conveniently arranged for doing the housework. In a cottage more attention usually is paid to the cellar than in houses, which is one reason for designing a good stairway to go down to the basement. The basement in a cottage house often is used for different kinds of storage, and there are a good many trips made down and up in the course of a work day.

Admitted to Lama Brotherhood. Although a foreigner and a "devil," the privileges of a lamaery in Tibet were accorded to Mr. Francis H. Nichols, whose curious diary is published in the current Bulletin of the American Geographical Society. It records his conviction that more than a third of the population of Tibet are lamas, ordained devotees of the state religion. In every family where there are five sons or more one is compelled by law to be a lama, and in some parts of Tibet there are lamaeries of women. The lamas' vows of celibacy and chastity furnish one reason why the population of Tibet is sparse. Children possessing "sacred signs of Buddha," consisting of ridges on the back of thumb or finger between the base and the first joint, are at once resigned to the lama class. Mr. Nichols was discovered to have fine ridges on his thumbs, which admitted him to the lama brotherhood and materially aided his studies.

Muddled Legislation. The dyeing industry, now so much under discussion, was once the subject of a curious piece of muddled legislation. In the reign of George III a bill was introduced into parliament for regulating the use of madder in dyeing. In its passage through the house it gathered some sixty sections of restrictions and enactments, but somehow in the chopping and changing the word "madder" became entirely deleted, and accordingly the measure was inoperative from the first.—Pall Mall Gazette.

Naturally. Boarding House Mistress—What part of the chicken do you wish? Freshman—Some of the meat, please.—Pennsylvania Punch Bowl.

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